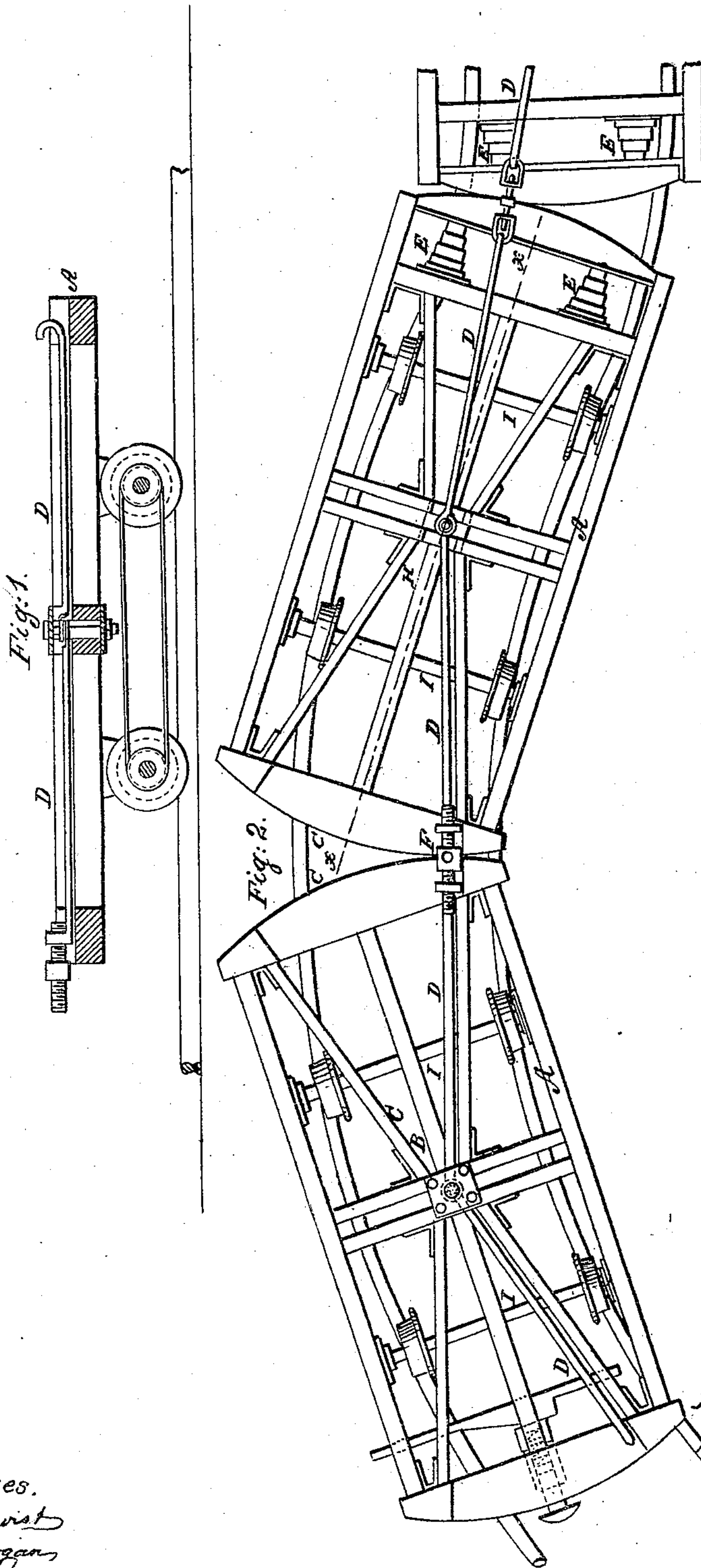


R. F. FAIRLIE.

Car Coupling.

No. 87,158.

Patented Feb. 23, 1869.



Witnesses.
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ROBERT F. FAIRLIE, OF LONDON, ENGLAND.

Letters Patent No. 87,158, dated February 23, 1869.

IMPROVED CAR-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, ROBERT F. FAIRLIE, of London, in England, have invented certain new and useful Improvements in Railway-Carriages and Wagons, and in the Means of Coupling them together; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a peculiar construction and arrangement of railway-carriages and wagons, and to an improved mode of coupling them together to form a train, whereby friction is considerably reduced, unpleasant shocks are avoided, the length of the train, for a given quantity of passengers or goods, is shortened, and other advantages are obtained, as I will proceed more particularly to describe, and, for that purpose, shall refer to the accompanying drawings.

Figure 1 represents a side elevation of the under framing only of a set of carriages or wagons, constructed and coupled together according to my invention.

Figure 2 is a corresponding plan of the same.

Similar letters of reference indicate like parts.

According to this invention, the under framing, A, of the carriages or wagons of a train, is coupled together from centre to centre, B B, of the framing, in lieu of being coupled at the extremities of the frames, as heretofore; and I also purpose to substitute for the ordinary buffers, a curved abutting-surface, C, on the end of each framing, the curve being struck from the coupling-centre B.

The coupling or traction-bars D D may be either rigid, as shown in the drawings, or combined with the usual or other draw-springs, and may consist of chains for a portion of their length, and the curved abutting-heads C C may also be either rigidly fixed to the framing, as shown at two of the couplings in fig. 2, or be combined with metal or India-rubber springs, for the sake of elasticity, as shown at E E in fig. 2.

The curved ends may be lined with India rubber, and should be covered with sheet-iron plating.

The coupling-bars D D, which are connected at each end to the centres B B of the several frames of the

carriages or wagons, may be divided in the middle, as shown in my drawings, each half being connected to the other by any convenient arrangement of screw-coupling, as shown at F, for the facility of tightening up the two wagons.

The coupling-bars D D may be either above the frames, as shown in the drawings, or below the frames.

It is obvious that this coupling-bar will always form the chord of the arc or curve (shown by a red line, G H, in fig. 2,) traversed by the wagons and carriages so coupled together, and as the traction-force is through the said chord, the line of draught will always, when passing over curves, be situate between the centre-line G H of the curved track and the inner rail of the curve, as seen clearly in fig. 2, in lieu of outside the centre-line, as in the ordinary coupling.

By the arrangement hereinbefore described, the centres of the axles I I of the several wagons or carriages A, are always left in the same relative position to or distance from each other, and consequently motion may be communicated from one to the other by means of driving-straps, bands, or chains, in conjunction with pulleys fast on the axles, which will be readily understood without the necessity of drawings.

If desired, auxiliary buffers may be adapted centrally to the ends of the frames, and caused to project beyond the curved heads, when uncoupled, in order to prevent shocks when the wagons or carriages are brought together for coupling up, or when otherwise subjected to shocks.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

The method of coupling, by means of rods pivoted at the centre of the trucks, having rounded ends, the rods being drawn together by right and left-hand screws, substantially as described, for the purpose specified.

The above specification of my invention signed by me, this 31st of August, 1868.

ROBT. F. FAIRLIE.

Witnesses:

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